Ground Water Quality Technical Report No. 21

Evaluation Of Water Quality Impacts Associated With FMC And Simplot Phosphate Ore Processing Facilities, Pocatello, Idaho

Department of Environmental Quality
Technical Services Division
January 2004

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FIGURES

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Figure 1. Air photo showing features in the East Michaud Flat and FMC/Simplot study area.

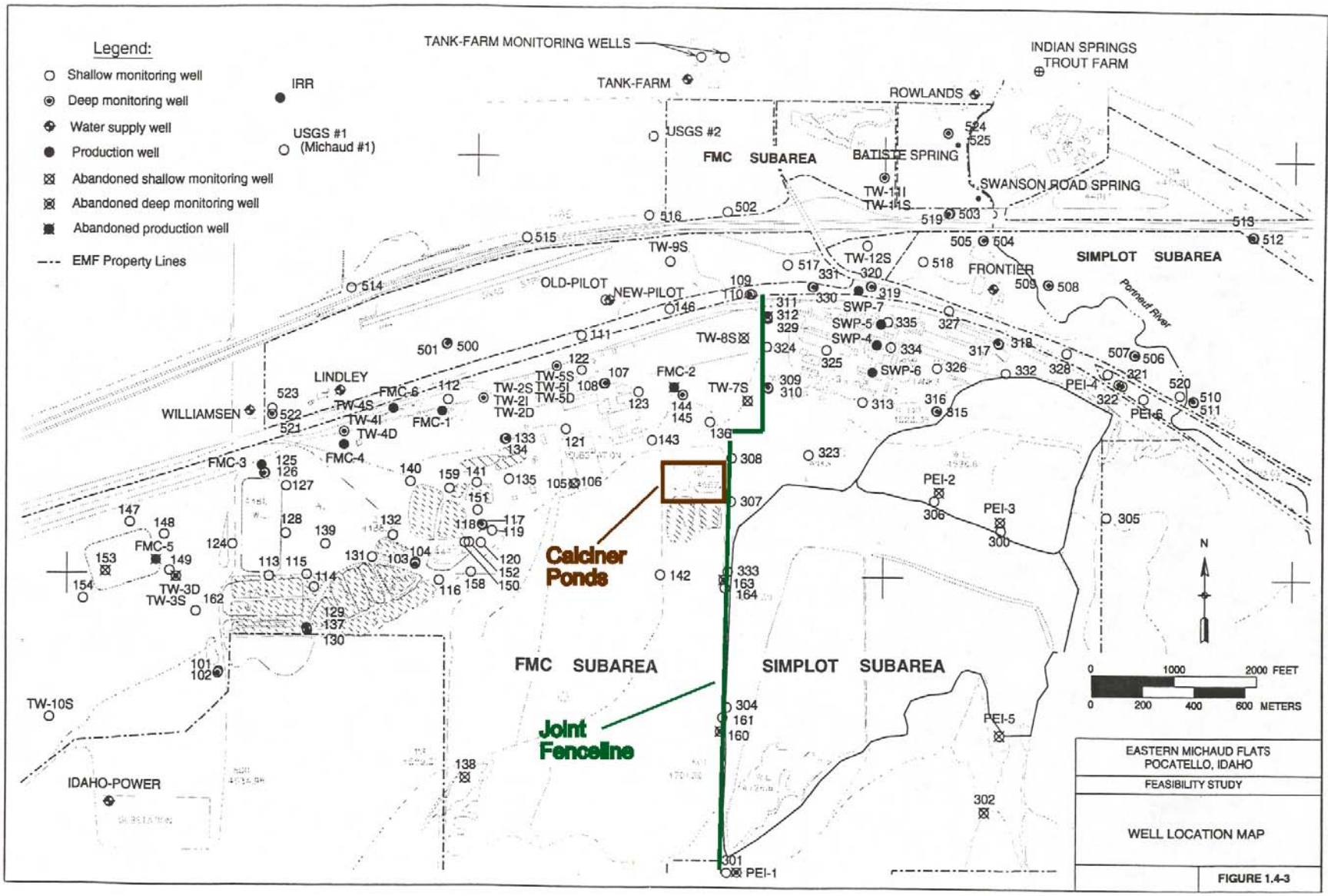


Figure 2. Locations of deep and shallow monitoring wells and production wells at the FMC/Simplot site. (Adapted from Bechtel Environmental Inc., June 1994.)

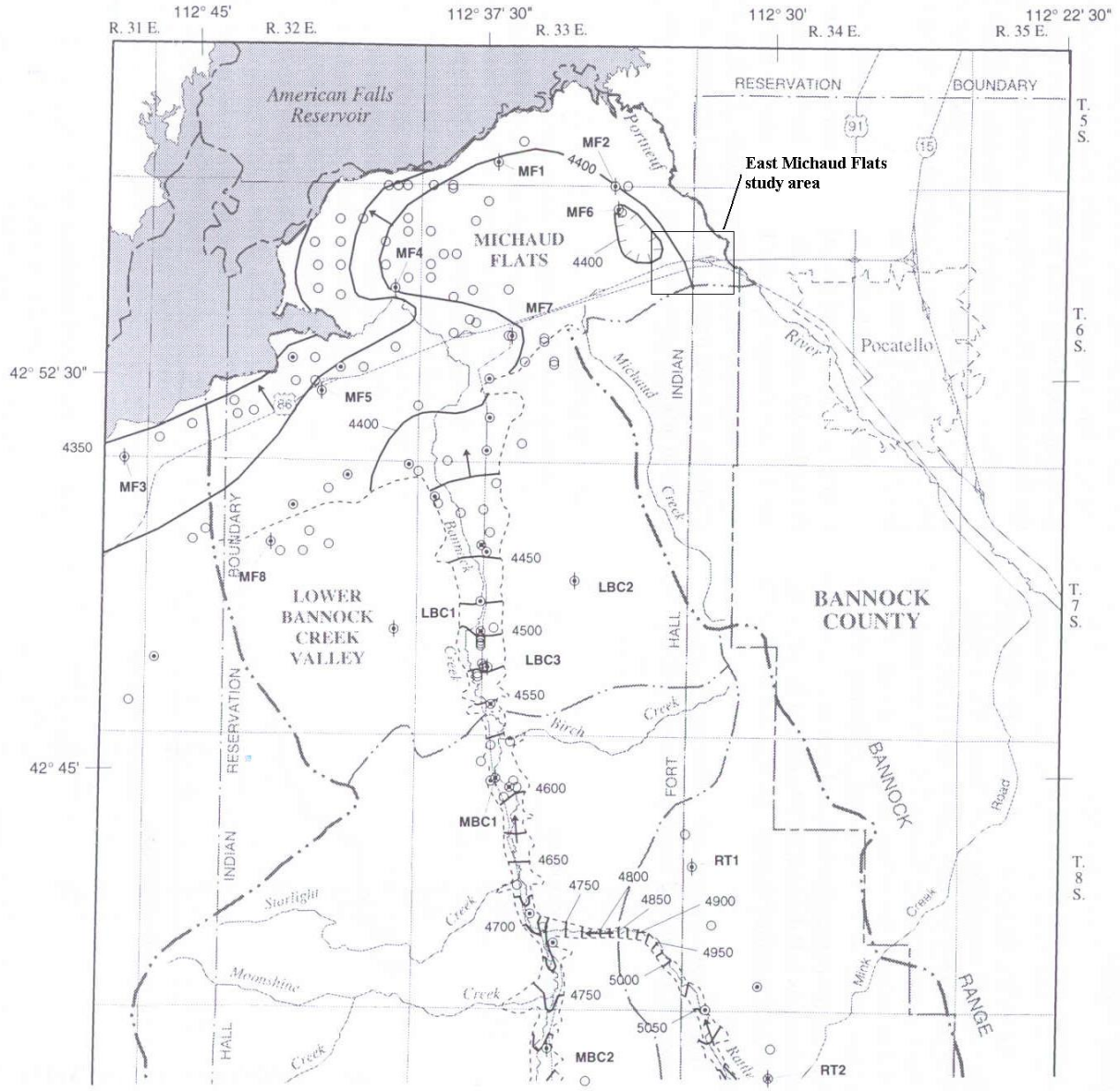


Figure 3. Potentiometric map of the lower Bannock Creek and Michaud Flats areas, showing location of the East Michaud Flats study area (modified from Spinazola and Higgs, 1998, figure 11).

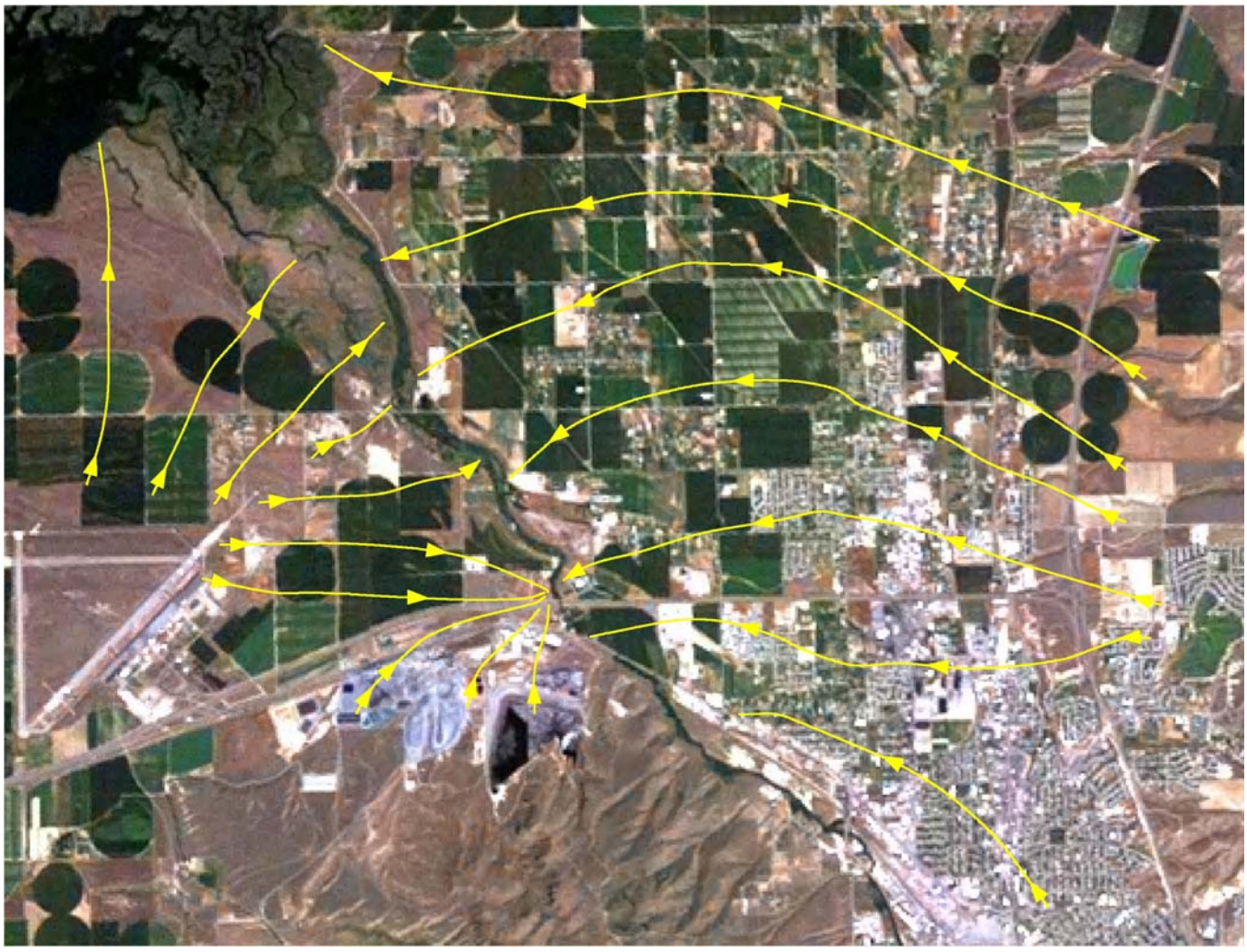


Figure 4. Ground water flow directions for aquifers east and west of the Portneuf River. Flow directions based on potentiometric maps from West and Kilburn, 1976, Plate 1, Jacobson, 1982, and Bechtel Environmental, Inc., June 1994.

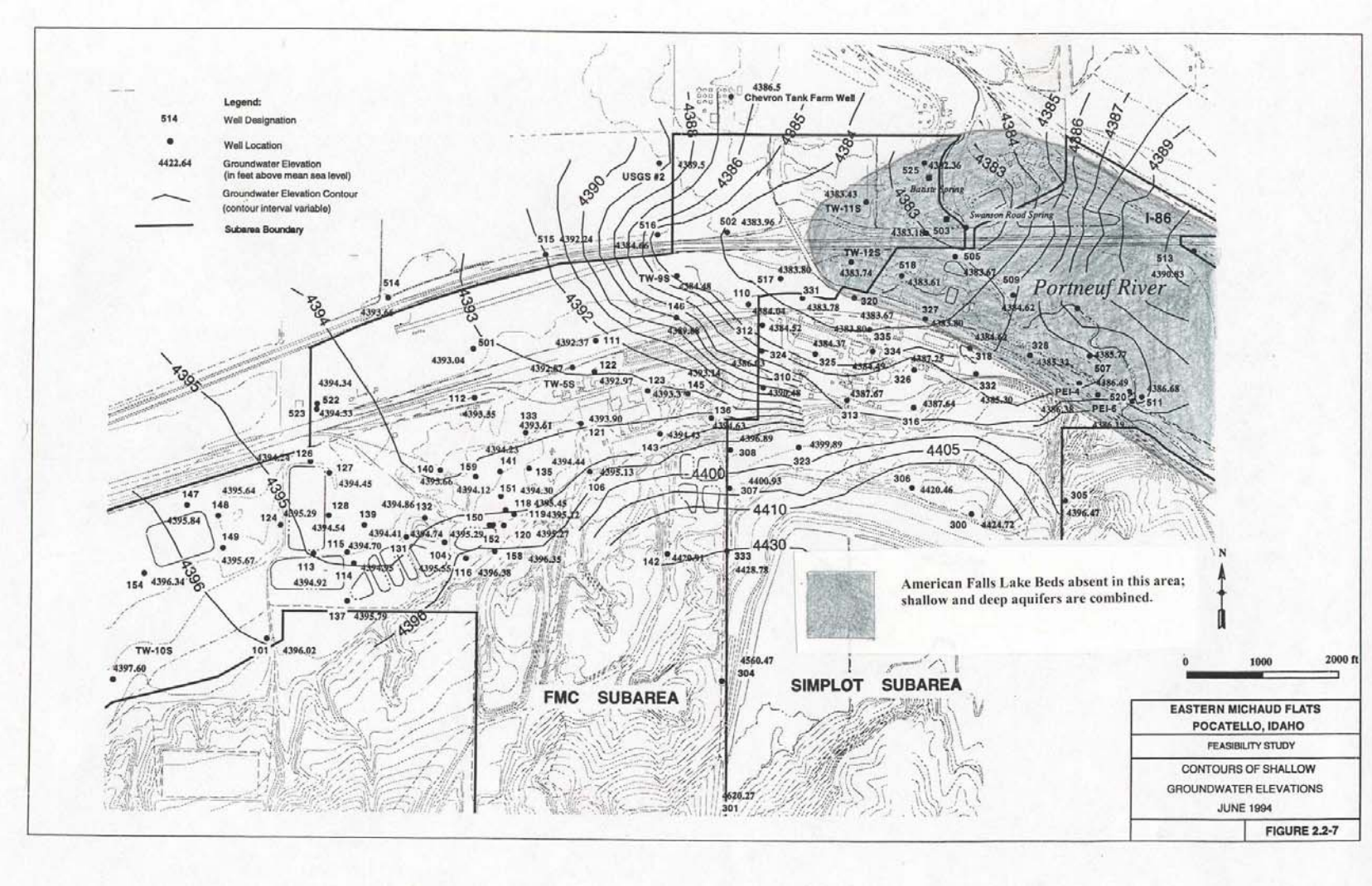


Figure 5. Potentiometric map for the shallow aquifer for the FMC/Simplot site. Shaded region represents area where American Falls Lake Beds are absent. Shallow and deep aquifers are combined in shaded area. (Adapted from Bechtel Environmental Inc., 1994.)

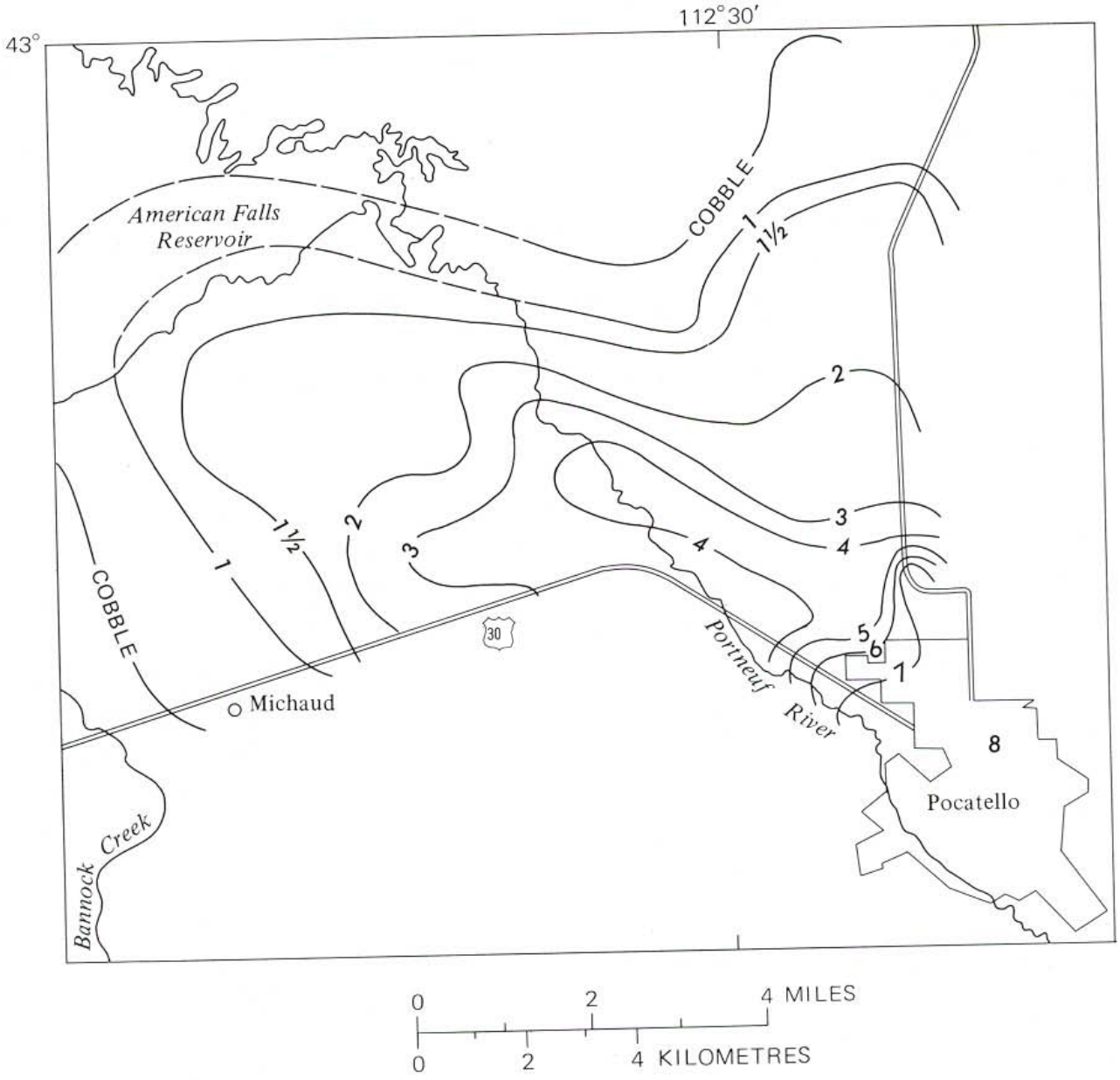


Figure 6. Areal variation in maximum boulder size in the Michaud gravels with contours in feet of longest dimension of largest boulders. (Adapted from Trimble, 1976, figure 13.)

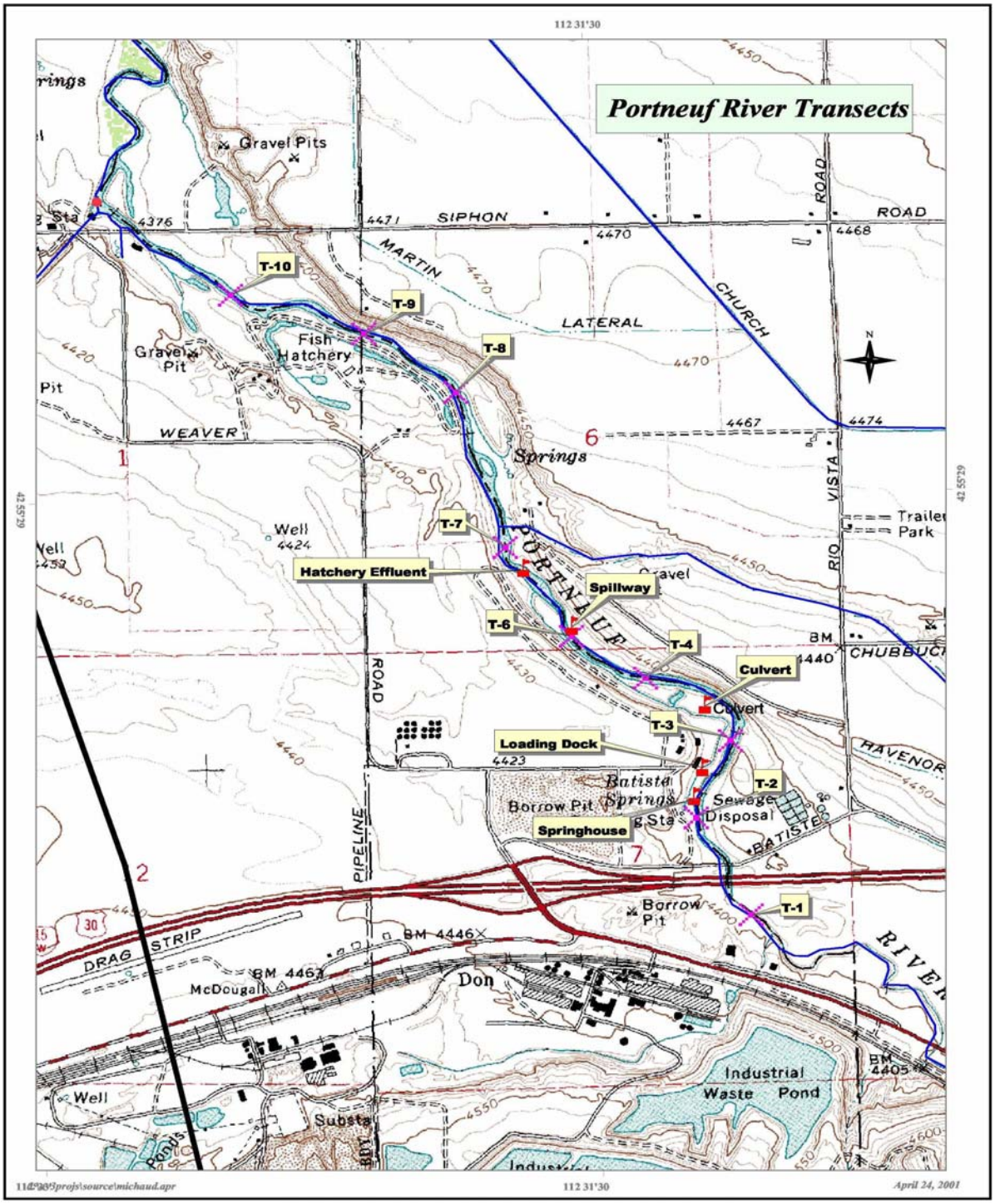
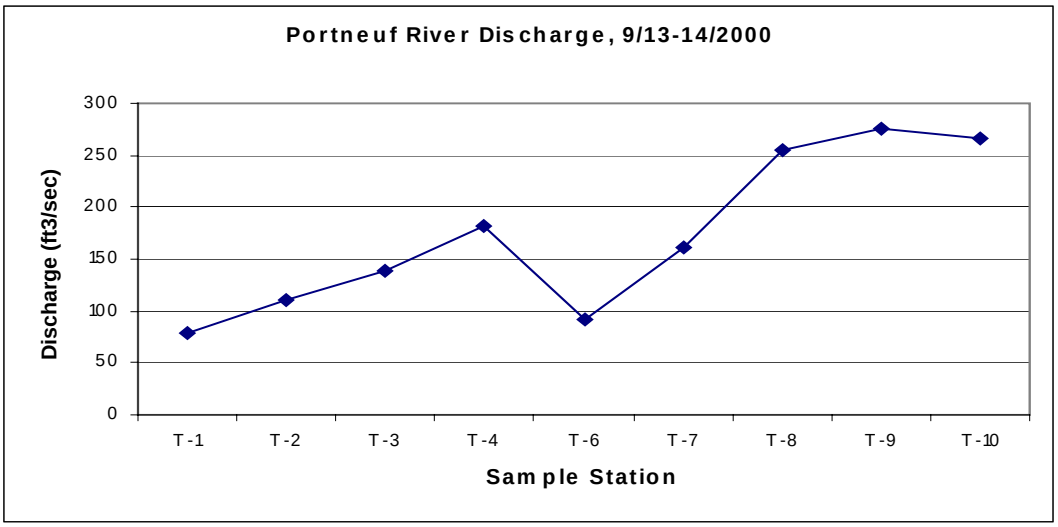
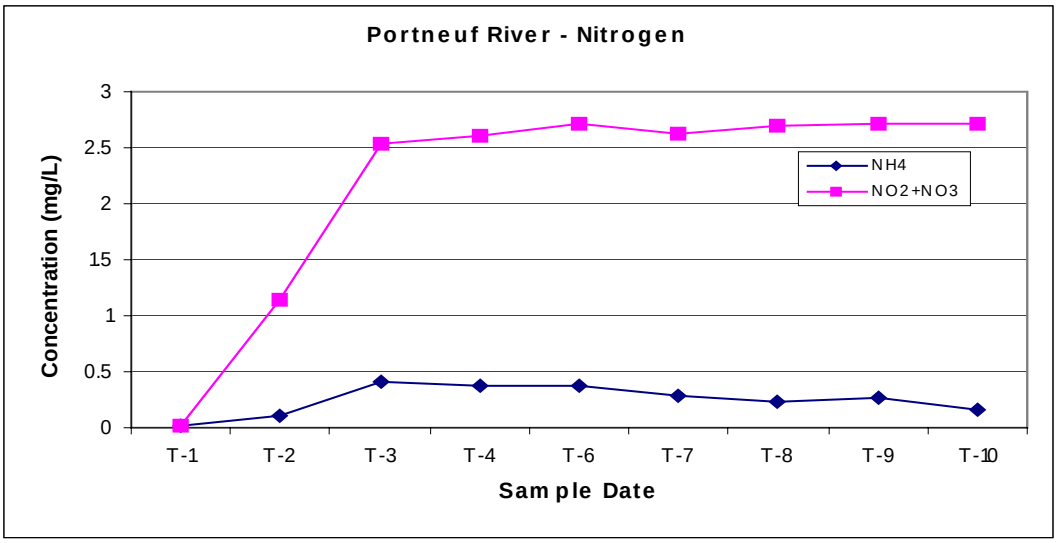


Figure 7. Transect locations sampled along the Portneuf River on September 13 and 14, 2000. Also shown are five Batiste Spring channel locations sampled from May 4, 1999 through December 7, 2000.





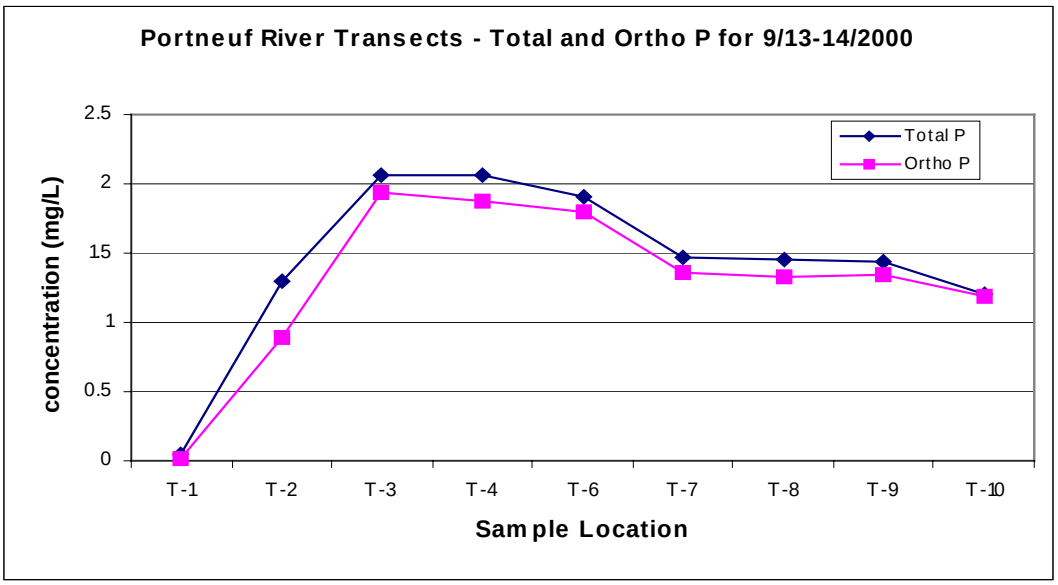


Figure 8. Discharge, ammonia, nitrite/nitrate, total phosphorus, and orthophosphate concentrations for Portneuf River transects sampled September 13-14, 2000.

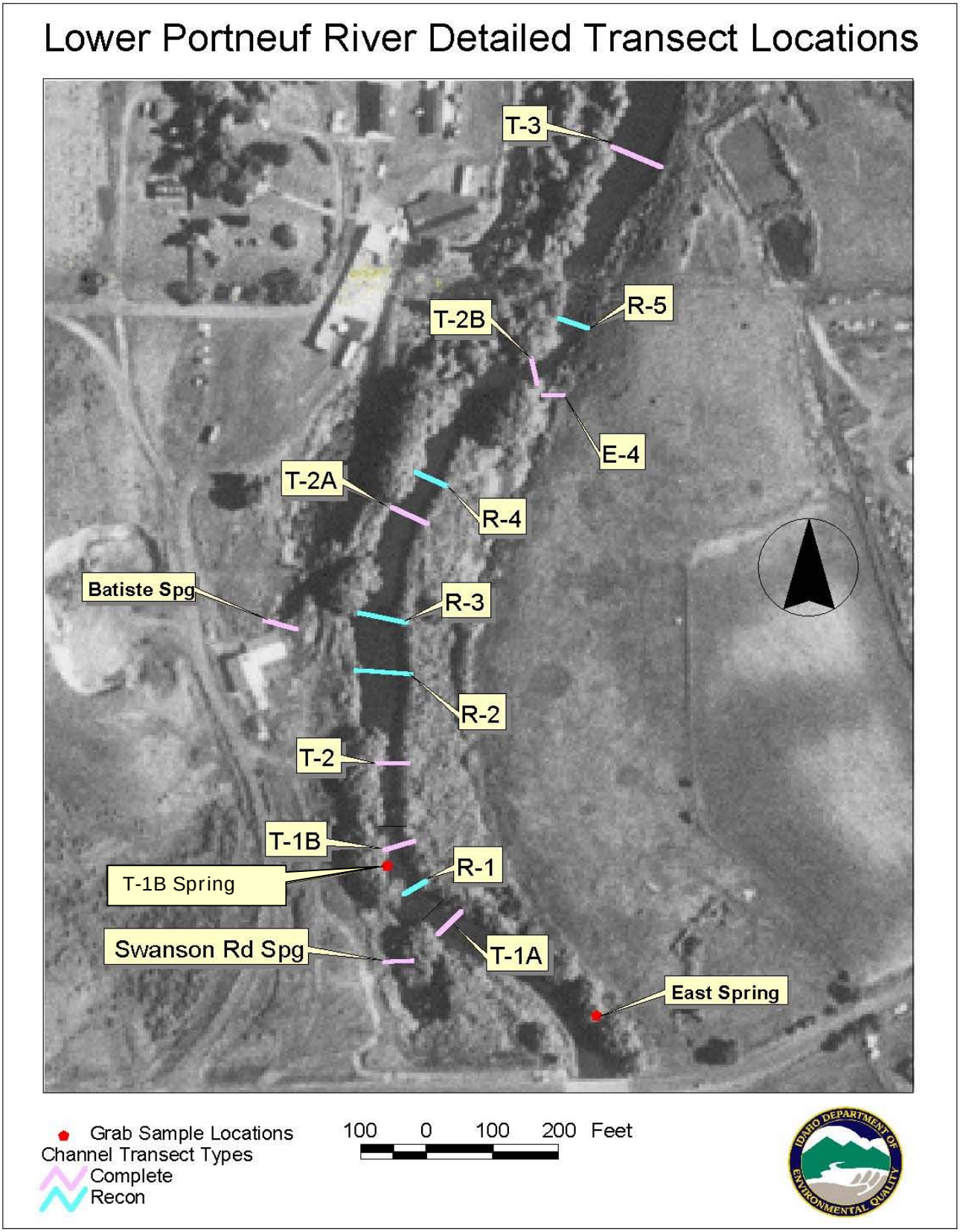
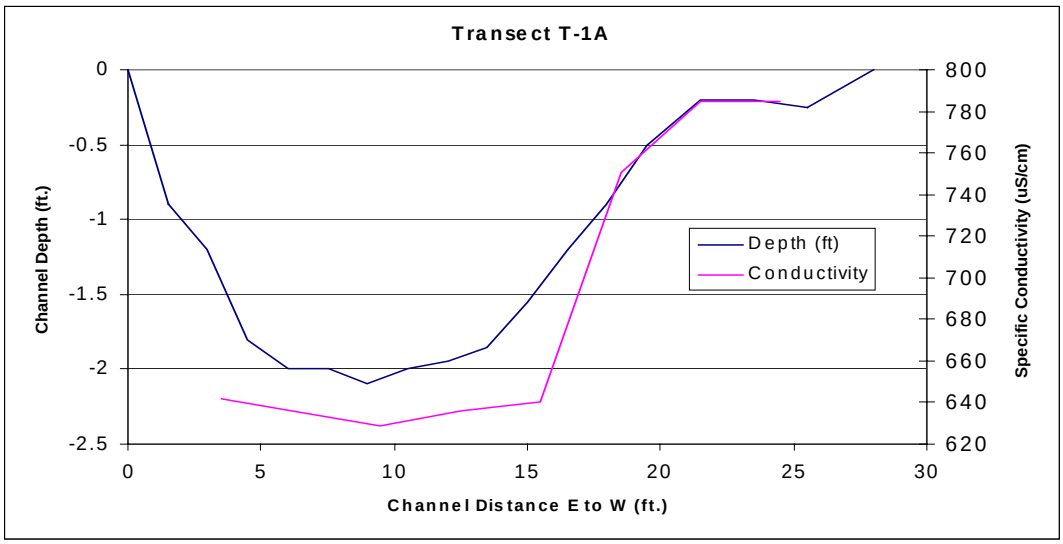
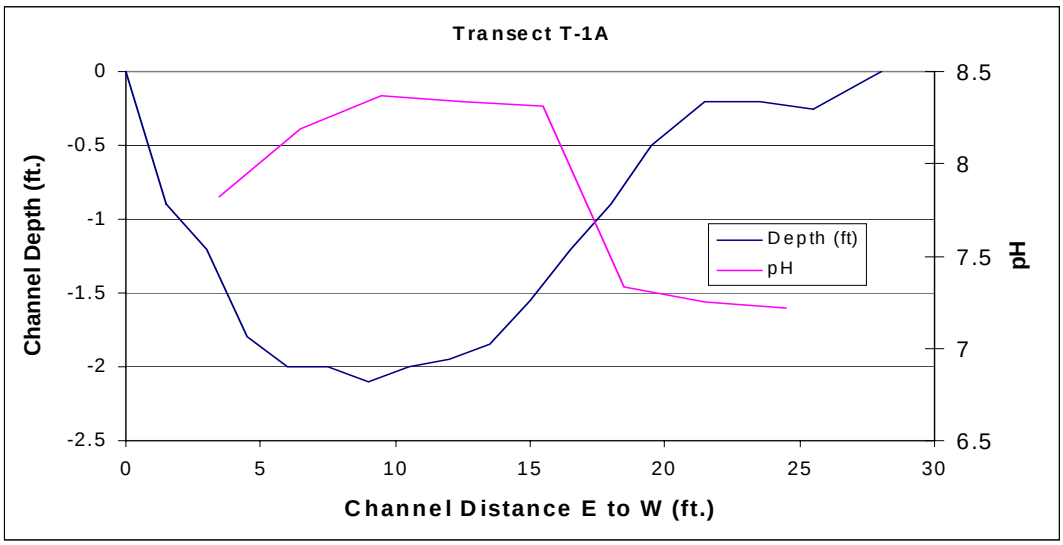


Figure 9. Location of reconnaissance transects R-1 through R-4 and additional transects T-1A through T-2B established along the Portneuf River during October 2001.





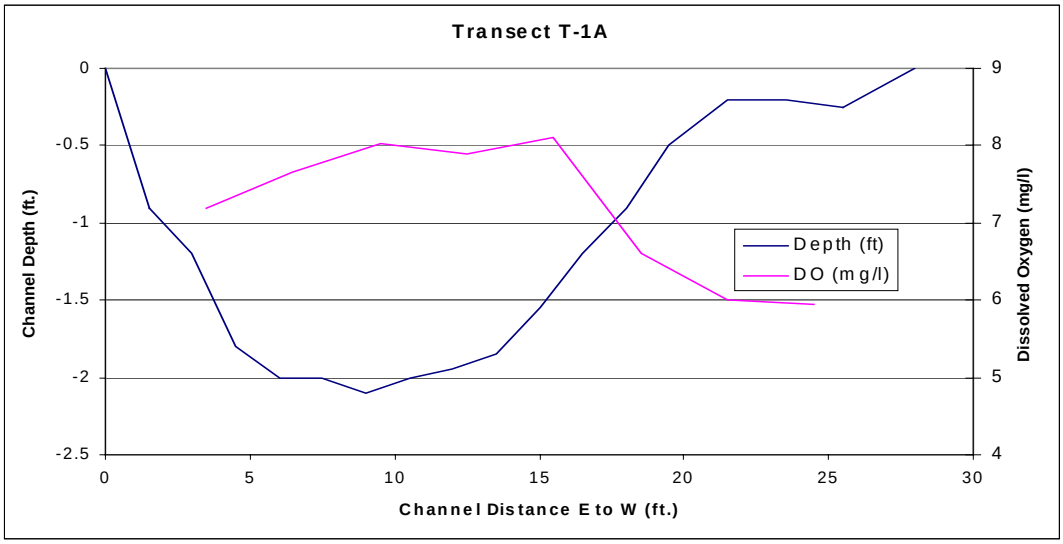


Figure 10. Portneuf River transect T-1A showing Specific Conductivity, pH, and dissolved oxygen measurements versus east to west channel distance.

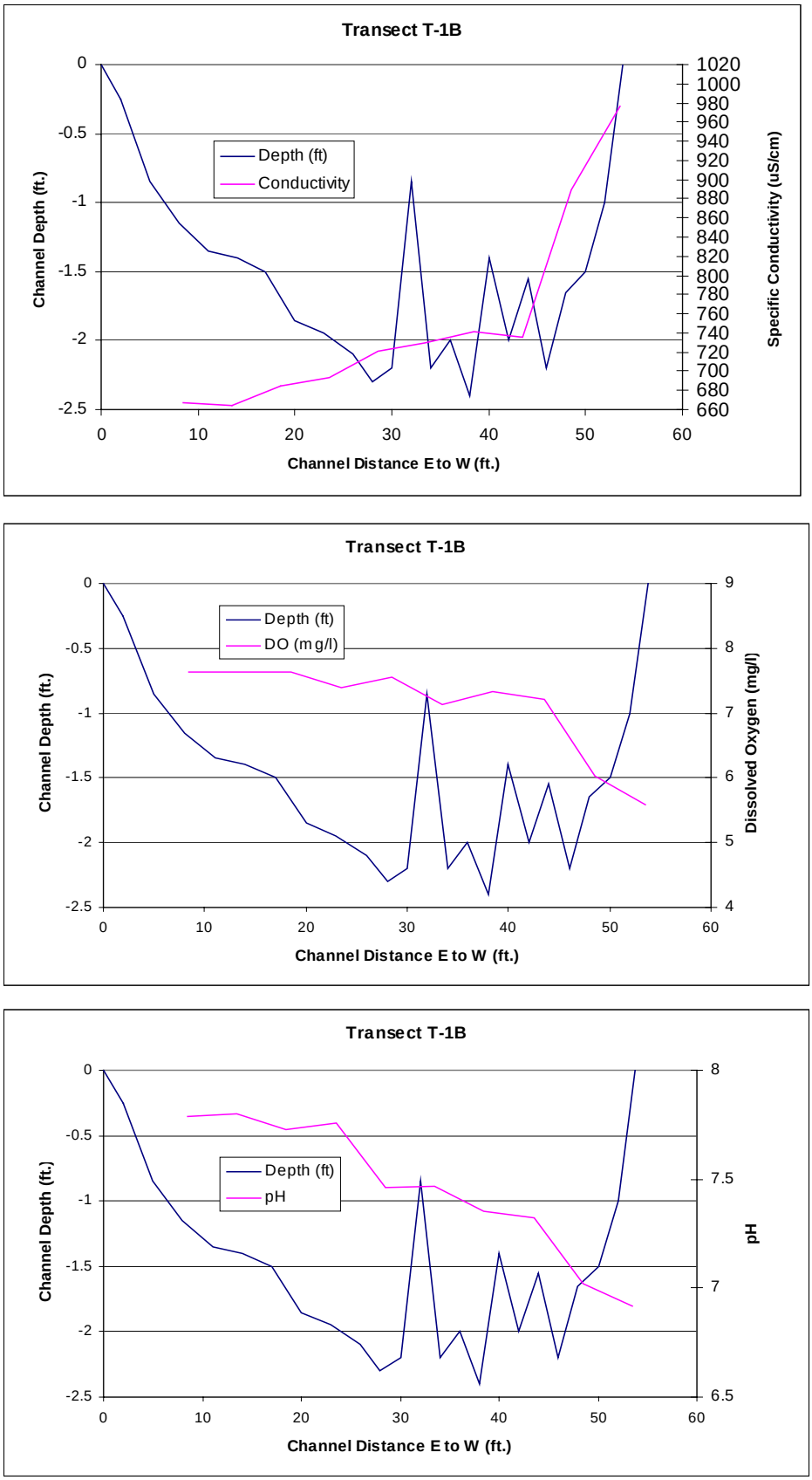
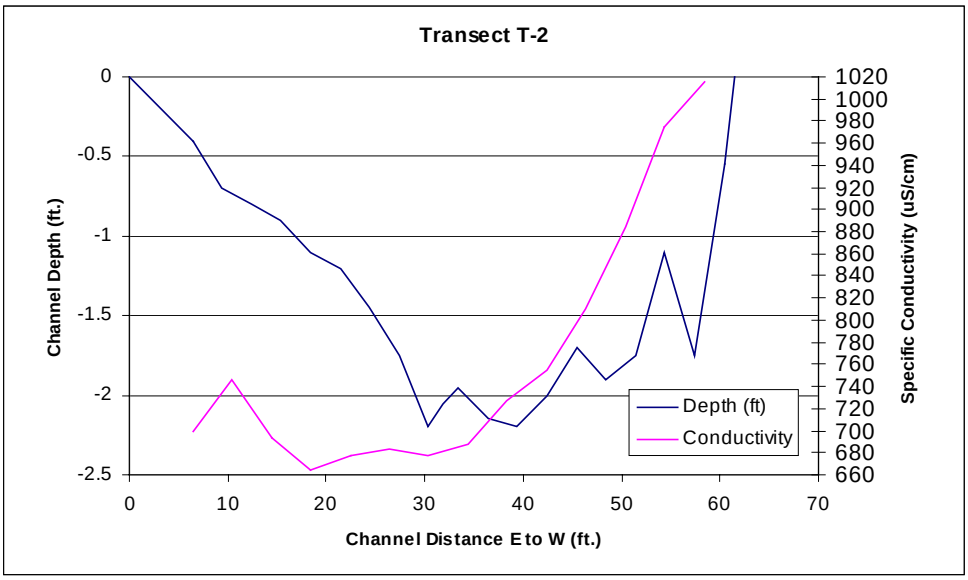


Figure 11. Portneuf River transect T-1B showing Specific Conductivity, pH, and dissolved oxygen versus east to west channel distance.



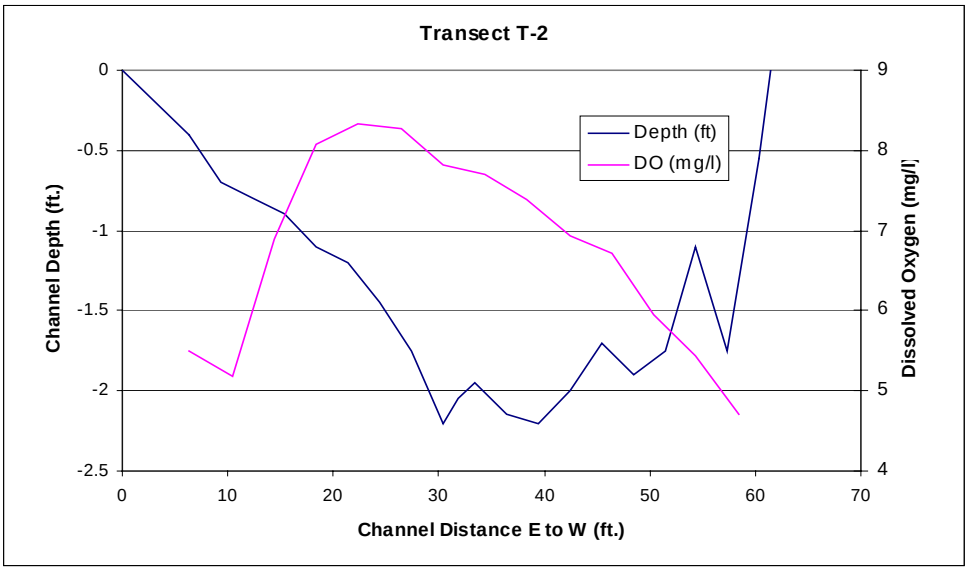


Figure 12. Portneuf River transect T-2 showing Specific Conductivity, pH, and dissolved oxygen versus east to west channel distance.

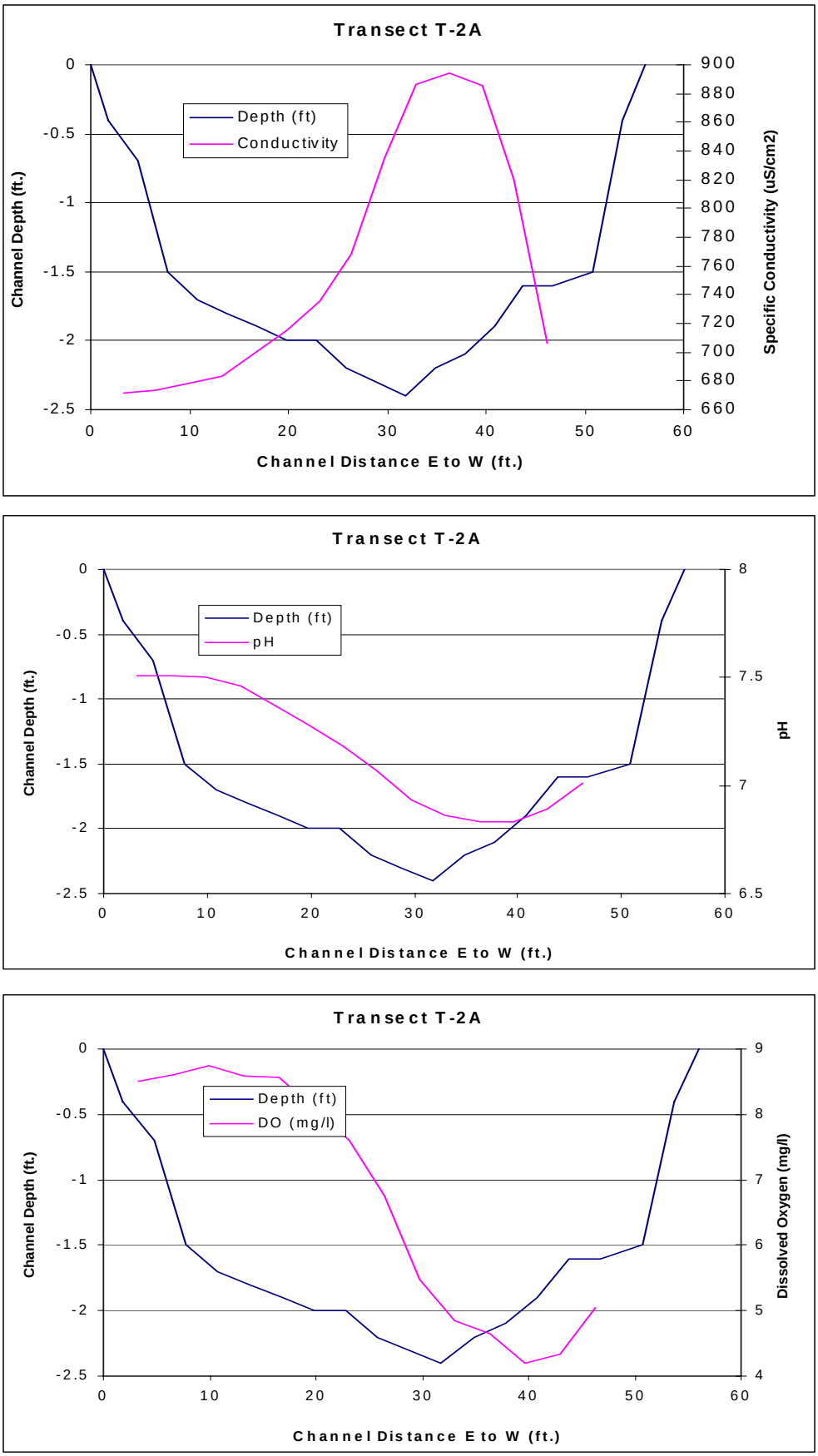
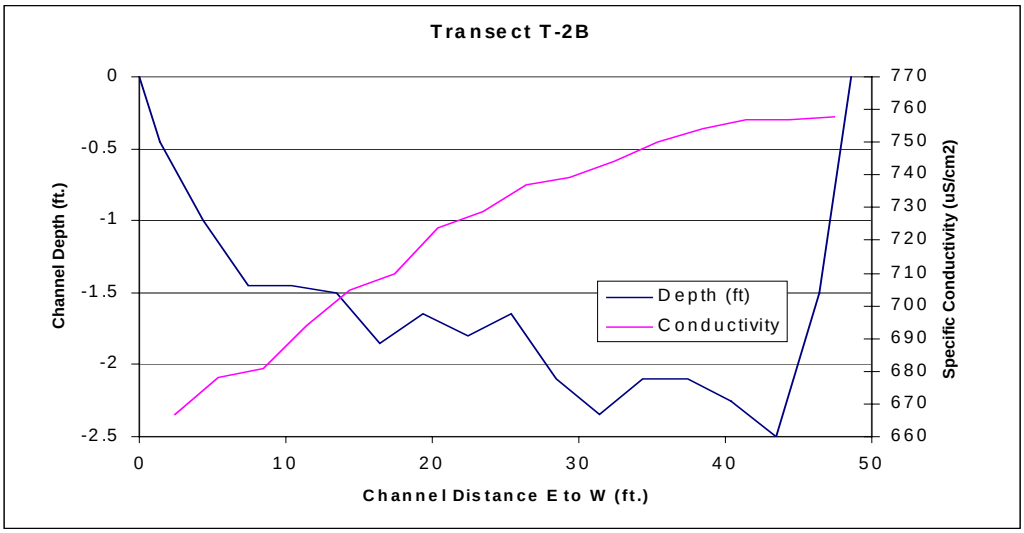
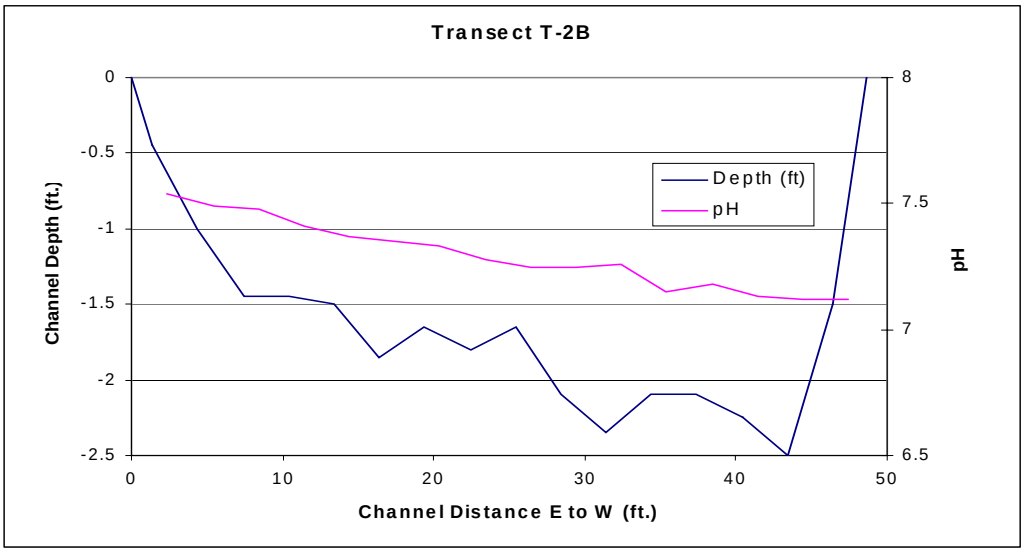


Figure 13. Portneuf River transect T-2A showing Specific Conductivity, pH, and dissolved oxygen versus east to west channel distance.





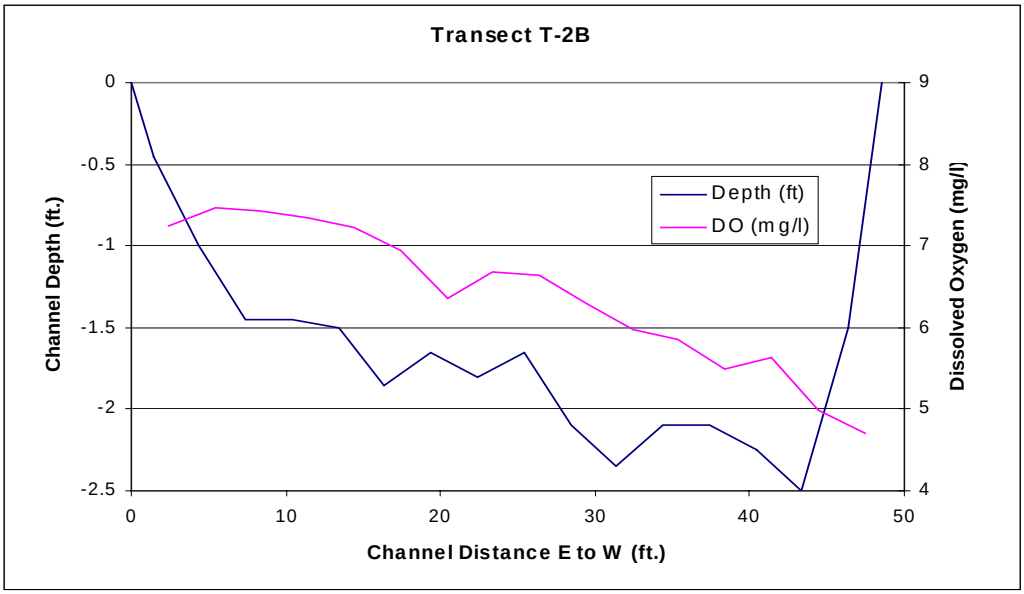


Figure 14. Portneuf River transect T-2B showing Specific Conductivity, pH, and dissolved oxygen versus east to west channel distance.